PageScanner
Hardware Reference
Library

Guide to Operations

94X2502

GK2T-0957-1

PageScanner
Hardware Reference
Library

Guide to Operations

| **Second Edition (October 1988)**

| This is a major revision of, and obsoletes GK2T-0957-0. Changes or
| additions to the text and illustrations are indicated by a vertical line to
| the left of the change.

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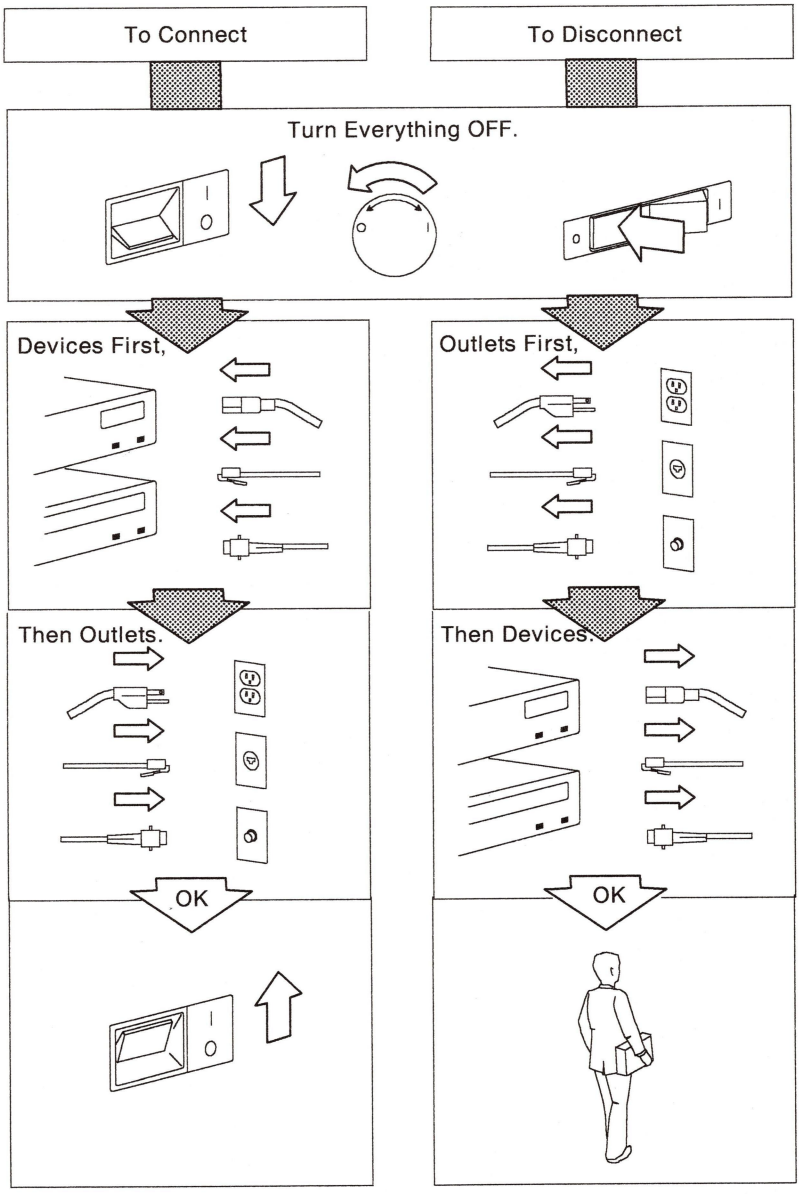
Electrical Safety

Electrical current from power, telephone, and communications cables is hazardous. Connect and disconnect cables as shown when installing, moving, or opening the covers of this product or attached devices.



The following statement applies to this IBM product. The statement for other IBM products intended for use with this product will appear in their accompanying materials.

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT

Warning: This equipment has been certified to comply with the limits for a Class B computing device, pursuant to Subpart J of Part 15 of FCC rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this computer when this computer is operated in a residential environment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Instructions to User: This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio or television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that computer and receiver are on different branch circuits.

Properly shielded and grounded cables and connectors must be used for connection to peripherals in order to meet FCC emission limits. Proper cables are available from IBM authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables or by unauthorized modifications to this equipment. It is the responsibility of the user to correct such interference.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

How to Identify and Resolve Radio-TV Interference Problems.

This booklet is available from the following:

- FOB Public Contact Branch

  Room 725
  1919 M St. NW
  Washington, DC 20554
  Tele. (202)634-1940

- Consumer Assistance and Small Business Division
  Room 254
  1919 M St. NW
  Washington, DC 20554
  Tele. (202)632-7000

CAUTION:
This product is equipped with a 3-wire power cord and plug for the user's safety. Use this power cord in conjunction with a properly grounded electrical outlet to avoid electrical shock.

Warning: To comply with FCC regulations on electromagnetic interference for Class-B computing device, the scanner cable must be shielded. To assure compliance with FCC regulations for a computing device, use scanner cable IBM part number 6456816 (reorder number 6456807). Use of cables not properly shielded may result in violation of FCC regulations.

ACOUSTIC NOISE EMISSION

The following chart shows the typical noise emission values of the IBM PageScanner.

L_{WAD}	Operating (bels)	3.5
	Idling (bels)	–
L_{pAm}	Operating (dB)	22.6
	Idling (dB)	–
$<L_{pA}>_m$	Operating (dB)	20
	Idling (dB)	17
Impulsive Noise		No
Prominent Discrete Tones		No

Notes:

L_{WAd} is the declared sound power emission level for a production series of machines.

L_{pAm} is the mean value of the sound pressure emission levels at the operator position (if any) for a production series of machines.

$<L_{pA}>_m$ is the mean value of the space-averaged sound pressure emission levels at the one-meter position for a production series of machines.

– Not applicable.

All measurements made in accordance with ISO DIS 7779, and reported in conformance with ISO DIS 7574/4.

Preface

This manual is for customers who use the IBM PageScanner. It provides instructions for setting up, operating, problem determination, and moving.

Use this manual with the manual supplied with the IBM Personal System/2®.

This manual consists of the following sections:

Section 1, "Introducing the PageScanner" provides a general description of this product.

Section 2, "Installing the PageScanner" provides step-by-step procedures to set up this product.

Section 3, "Operating the PageScanner" describes how to operate this product.

Section 4, "Testing the PageScanner" provides step-by-step procedures to help you resolve problems that may occur.

Section 5, "Moving the PageScanner" describes how to prepare the scanner unit for short-distance moves and for shipping.

Appendix A, "Getting the PageScanner Started" describes how to use programs contained in the IBM PageScanner Option Diskette to show you the functions of this product.

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Notes:

Section 1. Introducing the PageScanner

The IBM PageScanner is a desk-top, flat-bed, image capturing device and consists of two major functional units; the scanner unit and the 3119 Adapter/A. The PageScanner can scan gray-level images.

The PageScanner operates under control of an application program.

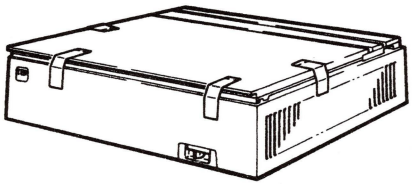
Notes:

Section 2. Installing the PageScanner

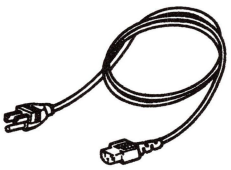
Checking Shipped Parts

You should have received the following items:

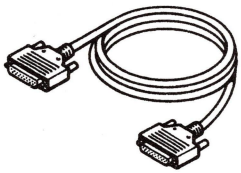
☐ Scanner Unit



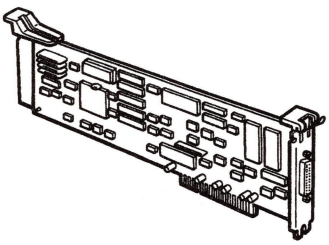
☐ Power Cord



☐ Scanner Cable

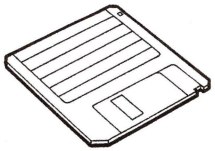


☐ 3119 Adapter/A

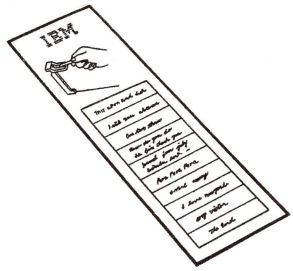


Continued on the next page.

☐ IBM PageScanner Option Diskette



☐ Option Identification Label



Note: If any item is missing or damaged, contact your place of purchase.

Save all packaging material for possible later use.

Installation Instructions

Copying the Option Diskette

Merge the PageScanner diagnostics program into the backup copy of the Reference Diskette.

1 Insert the backup copy of the Reference Diskette into drive A.

2 Start the Reference Diskette.

3 Select **Copy an option diskette** from the menu shown on the screen.

4 Follow the instructions shown on the screen.

Installing the 3119 Adapter/A

1 Attach the option identification label to the top of the retainer on the 3119 Adapter/A.
Refer to the figure on the option identification label.

2 Turn off the computer and all attached devices.

3 Unplug the power cords from the wall outlet.

4 Remove the computer cover.

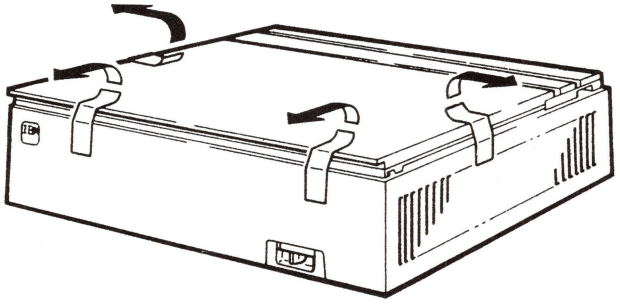
Note: Refer to the *IBM Personal System/2 Quick Reference* supplied with the IBM Personal System/2 for instructions to remove the computer cover, install the 3119 Adapter/A, and install the computer cover.

5 Install the 3119 Adapter/A in any available expansion slot.

6 Install the computer cover.

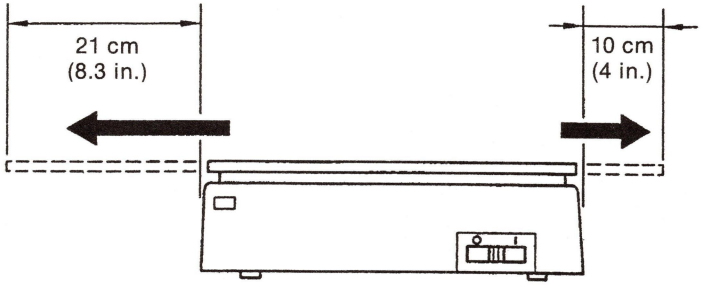
Cabling the PageScanner

1 Remove all shipping tape from the scanner unit.



2 The scanner table moves from right to left while scanning the document.

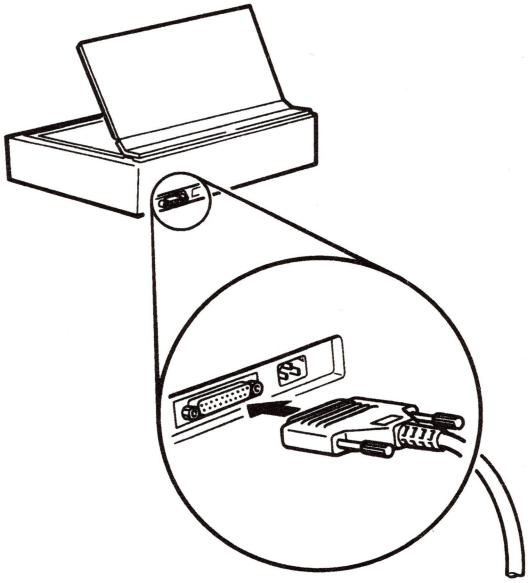
Be sure to leave enough space on the right and left sides of the scanner to allow for the movement of the scanner table.



3 Connect the scanner cable to the scanner unit and the 3119 Adapter/A.

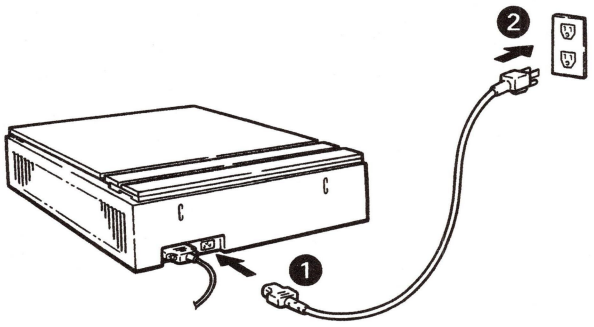
CAUTION: (Canada Only)
Only scanner cable IBM part number 6456816 (reorder number 6456807) may be used with the IBM 3119 Adapter/A. Use of an alternate cable may present a safety hazard.

Warning: To comply with FCC regulations on electromagnetic interference for Class-B computing device, the scanner cable must be shielded. To assure compliance with FCC regulations for a computing device, use scanner cable IBM part number 6456816 (reorder number 6456807). Use of cables not properly shielded may result in violation of FCC regulations.



4 Make sure that the power switch is set to **O** (Off).

5 Connect the power cord to the scanner unit first, then to the wall outlet.



CAUTION:
This product is equipped with a grounded plug for the user's safety. It is to be used in conjunction with a properly grounded receptacle to avoid electrical shock.

Checking the PageScanner

1 Insert the Reference Diskette into drive A.

2 Turn on all attached devices, then turn on the computer.

3 The computer now runs the automatic configuration program. Answer any questions as required. Once the automatic configuration is complete, your IBM Personal System/2 is ready to use.

4 Select **Test the Computer** from the menu shown on the screen.

5 Follow the instructions shown on the screen.

If you have any problem, go to Section 4, "Testing the PageScanner" on page 4-1.

Notes:

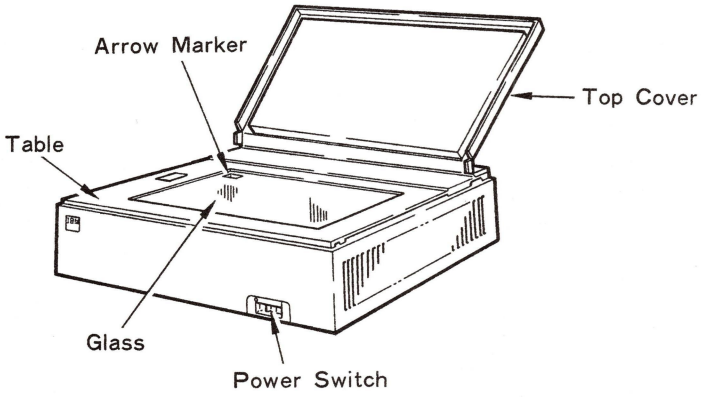
Section 3. Operating the PageScanner

This section provides basic information on using the PageScanner. Read this section before using the scanner, then follow the instructions as necessary.

Becoming Familiar with the PageScanner 3-2
Before Using the PageScanner 3-3
Scanning Documents 3-4
Cleaning the Scanner 3-7

Becoming Familiar with the PageScanner

The following diagram shows the various parts of the PageScanner.



Power switch: Use this switch to turn the scanner's power on and off.

Arrow marker: Use this mark to orient a document on the glass. Position the corner of the document on the arrow marker.

Glass: Place a document, face down, on this surface. Align the edge of the document with the left edge of the glass.

Top cover: Close the top cover after placing a document on the glass. This cover holds the document in place and prevents outside light from interfering with the normal position of the scanner (strong outside light may prevent the scanner from scanning the image clearly).

Before Using the PageScanner

Ensure that:

- The top cover is closed.
  Otherwise, the scanned image may not be clear.
- Enough space is provided at the right and left sides of the scanner to allow the table to move correctly. The table needs 21 cm (8.3 in.) on the left side and 10 cm (4 in.) on the right side to ensure correct movement.
- Do not place objects that are heavier than 1 kg (2 lb) on the table.
- Some colors of inks (for example; pale yellow or pure green) may not be scanned by the PageScanner.

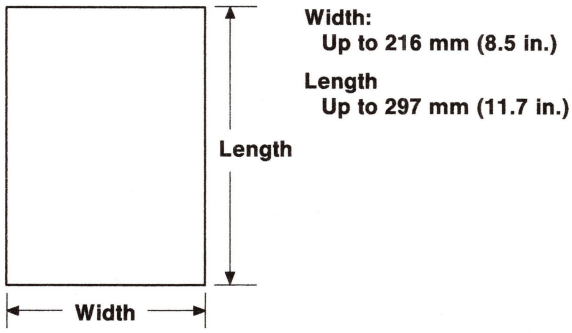
Scanning Documents

The PageScanner starts scanning when you make a request through your application program. It scans a whole page or a partial page as specified in your application program.

This section gives the instructions that are necessary before you issue the scan request.

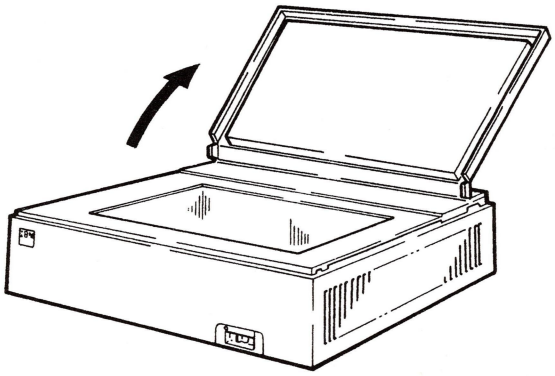
1 Check the specifications of the document that you want to scan.

- Document size must be:

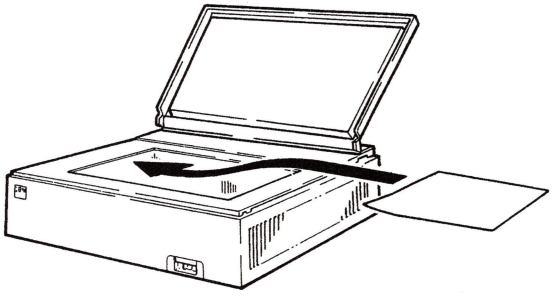


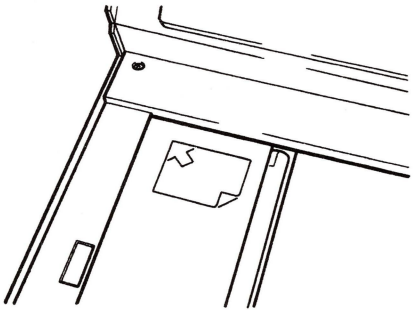
- Document weight must be less than 1 kg (2 lb).

2 Lift the top cover. Make sure the table is centered on the scanner. If it is not, center the table by hand.

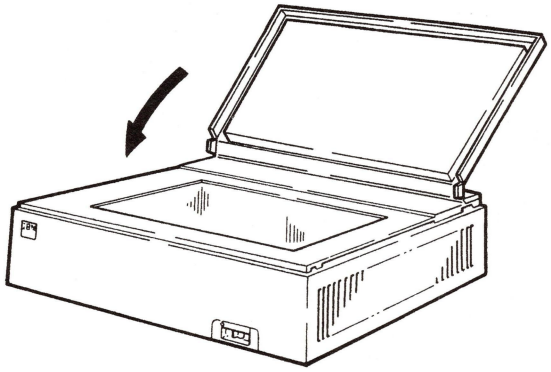


3 Place the document on the glass, **face down**, and align it with the arrow.

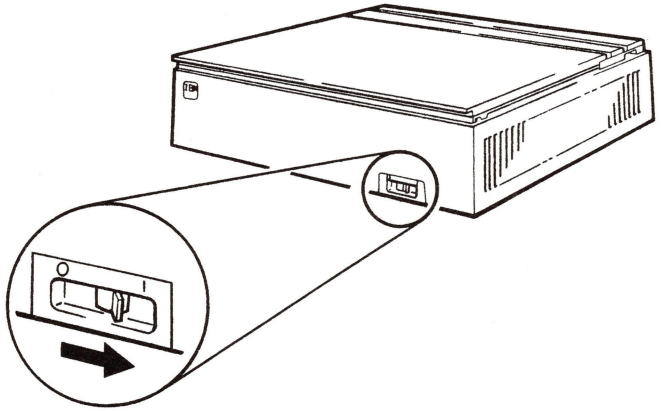




4 Close the top cover.



5 Set the power switch on the scanner to **I** (On).



Cleaning the Scanner

Clean the glass periodically to maintain high quality scanning. Use a soft, non-abrasive, damp cloth.

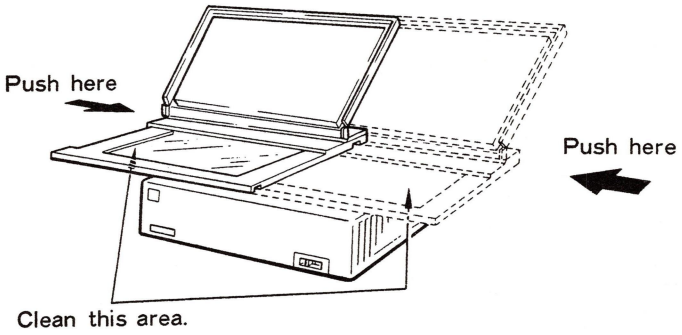
Warning: Do not use paint thinner or other organic solvents.

To Clean the Glass:

1 Set the power switch on the scanner to **O** (Off).

2 Open the top cover and clean the top side of the glass.

3 Move the table to the right and the left sides to clean the underside of the glass at both ends.



4 After cleaning the glass, move the table back to the center of the scanner.

Notes:

Section 4. Testing the PageScanner

Start Here

Problems with your system can be caused by software, hardware, or both. This section will help you determine the cause of a problem and what to do about it.

How to Get Service

If service is needed on your:

- Scanner Unit
  1. Refer to Section 5, "Moving the PageScanner" on page 5-1 to pack the scanner unit.
  2. Call your place of purchase.
- System Unit
  - See the *IBM Personal System/2 Quick Reference.*

How to Call IBM for Service

Requests for service should be directed to the IBM Service/Exchange Communications Center (S/ECC) by dialing toll-free 1-800-IBM-SERV in the U.S..

Customers in countries other than the U.S., should contact the local IBM Customer Service Dispatch or the place of purchase.

Before making the call, be prepared to give:

- Machine type, model, and serial number
- Symptom
- Your name, telephone number, address, and zip code.

Problem Determination Procedures

1 Turn off the computer and all attached options.

2 Start the Reference Diskette.

3 Select **Test the Computer** from the screen menu.

4 Follow the instructions shown on the screen.

5 If you still have a problem, go to "Troubleshooting Chart" on page 4-3.

Troubleshooting Chart

Problem	Action
3119 Adapter/A does not appear on the installed device list.	Check that the option diagnostics program has been merged into your backup copy of the Reference Diskette, and retry the isolating procedure. If you still have the same problem, have the system unit serviced.
The message on the screen guides you to have the system unit serviced.	1. Disconnect the scanner cable from the 3119 Adapter/A. 2. Have the system unit serviced.
• The message on the screen guides you to have the scanner unit serviced. • The scanned image is not correctly displayed on the screen. • Image problems.	Have the scanner unit, scanner cable, and the power cord serviced.
All other problems	1. Find the symptom in the **Troubleshooting Chart** in the *IBM Personal System/2 Quick Reference*. 2. If you still have the problem, ask your place of purchase for assistance.

Notes:

Section 5. Moving the PageScanner

Preparing to Move the Scanner 5-2
Short-Distance Move 5-3
Long-Distance Move 5-4
Installing at Your New Location 5-5

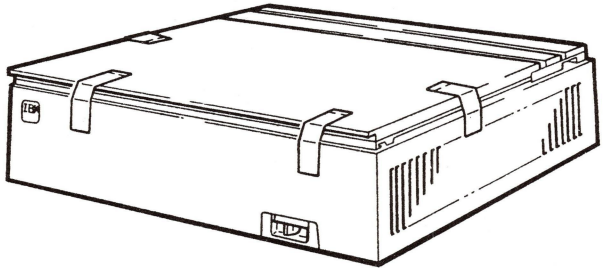
Preparing to Move the Scanner

1 Turn off the computer and all attached devices.

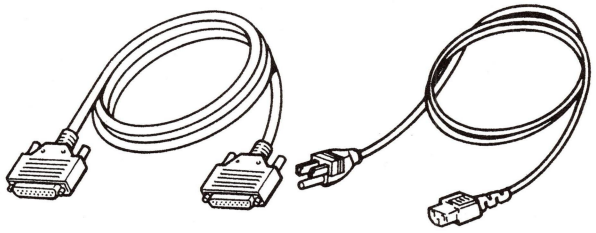
2 Set the power switch on the scanner to **O** (Off).

3 Unplug the power cord from the wall outlet, then from the scanner. Disconnect both ends of the scanner cable.

4 Using masking or filament tape, tape the top cover as shown so that the cover will not open and the table will not move.



5 Coil the power cord and the scanner cable.



Short-Distance Move

Short distance refers to any distance where trucking is not involved — for example, from one office to another or from one floor to another.

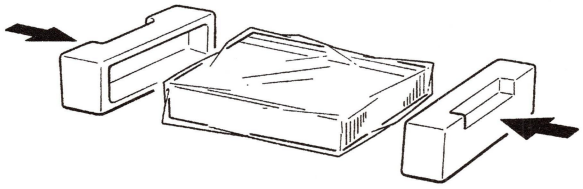
You do not need to pack the scanner unit for a short-distance move. Disconnect the scanner from the system unit and then carry it carefully to avoid any shocks or vibrations.

Long-Distance Move

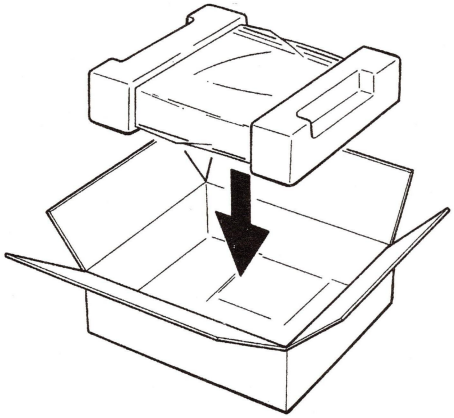
For a long-distance move, pack the scanner unit, scanner cable, and power cord using the original carton and packing material.

1 Insert the scanner unit into the vinyl bag.

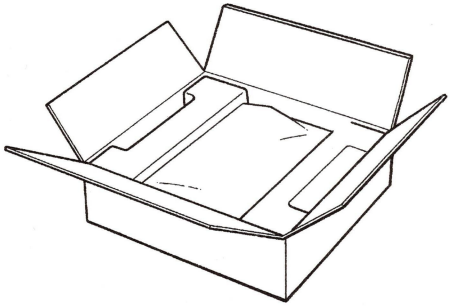
2



3



4



Installing at Your New Location

When your PageScanner arrives at the new location, carefully unpack the unit. Then set up the scanner as described in Section 2, "Installing the PageScanner."

Notes:

Appendix A. Getting the PageScanner Started

The IBM PageScanner Option Diskette contains two programs:

- PageScanner Getting Started; that runs under DOS version 3.3.
- PageScan; that runs under DOS version 3.3 or version 4.0, and Microsoft[1] Windows version 2.03 or Windows/286 version 2.10.

These programs are given to users of this manual as an appendix to show and to help you understand the functions of the PageScanner. The programs allow you to scan, view, and file gray-scale images and black-and-white images with the IBM Personal System/2 and the PageScanner. The image data that is filed (see note) can be used with a variety of desktop publishing programs.

Note: A TIFF format is used (compatibility with other programs is not verified).

Notice to users

IBM provides these programs "as is" without warranty of any kind, either express or implied. The entire risk as to the quality and performance of the programs is with you. Should the programs prove defective, you (and not IBM or any IBM authorized representative) assume the entire cost of all necessary servicing, repair or correction.

This appendix consists of:

- Use of PageScanner Getting Started program
- Use of PageScan program

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Use of PageScanner Getting Started Program

To run the program, you must install the program on the fixed disk.

The following procedure assumes that you:

- Have a fixed disk named C.
- Have DOS version 3.3 installed on the fixed disk.
- Do not have a subdirectory called *gs* in your root directory on the fixed disk.
- Completed the installation of the PageScanner.

Installation of the Program

1 Make drive C the default by typing:
c:
and pressing **Enter**.

2 Type:
**cd **
and press **Enter**.

First, create a subdirectory called *gs*.

3 To create the *gs* subdirectory, type:
md gs
and press **Enter**.

4 Change to the subdirectory by typing:
cd gs
and pressing **Enter**.

Next, copy the program from the option diskette into the *gs* subdirectory.

5 Insert the IBM PageScanner Option Diskette into drive A.

6 To copy the program on the option diskette to your fixed disk, type:
copy a:\gs*.*
and press **Enter**.

Auto Demo

The Auto Demo function is to help you understand functions and operations of the program. It is recommended that you use this function first.

To start the Auto Demo function:

1 Change the subdirectory by typing:
cd\gs
and pressing **Enter**.

2 Type:
autogs
and press **Enter**.

Note: You can stop the operation by pressing the **Esc** key.

Starting the PageScanner Getting Started Program

If you use a mouse, load the mouse driver (see the mouse driver documentation for instructions).

To start the program,

1 Change the subdirectory by typing:
cd\gs
and pressing **Enter**.

2 Type:
startgs
and press **Enter**.

Use of PageScan Program

What is the PageScan Program: The PageScan program allows you to scan and save gray-scale images and black-and-white images while using a desktop publishing program in Microsoft Windows. Using this program, you can get high quality scanned images with a minimum size of the image file.

To run the program, you must install the program on the fixed disk.

The following procedure assumes that you:

- Have a fixed disk named C.
- Have DOS version 3.3 or version 4.0 installed on the fixed disk.
- Have Microsoft Windows version 2.03 or Windows/286 version 2.10 installed on the fixed disk.
- Are familiar with the Microsoft Windows operation.
- Completed the installation of the PageScanner.

Installation of the Program

1 Turn on your computer.

2 Insert the IBM PageScanner Option Diskette into drive A.

3 Type **copy a:\ps*.* c:*subdirectory-name***
and press **Enter**.

Note: You can use any subdirectory-name.

Operational Summary

To scan and save the image, you must:

1. Start the Microsoft Windows.
2. Start the PageScan program.
   a. Choose printer resolution; the program must know your printer resolution to calculate the most suitable scanning resolution.
   b. Preview scan; to scan a whole area of a document.
   c. Scan/Save; looking at the preview-scanned image, you specify the area you want to save, and you specify the actual print size.

Starting the PageScan Program

1 Start the Microsoft Windows.

2 Change to the subdirectory that contains the PageScan program.

3 Double-click the **pagescan.exe.**

4 Click **OK.**
The PageScan main window appears.

Help for PageScan: Before working with the PageScan program, it is recommended that you read **Help** first. **Help** contains a detail description about the PageScan program. To read the description, click **Help** in the menu bar.

Choosing the Printer Resolution

1 Click **Scan** in the menu bar.

2 Click **Target Printer** in the **Scan** menu.

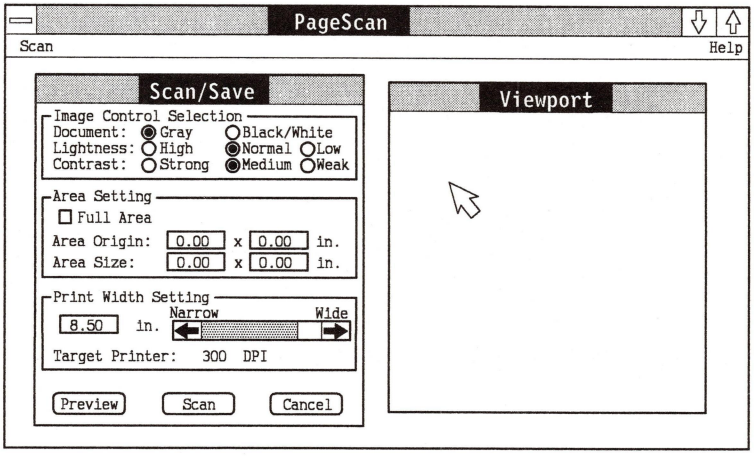
3 Select your printer resolution.
The printer resolution means the number of printing dots per inch. If you do not know your printer resolution, refer to your printer manual.

4 Click **OK.**

Preview Scan

1 Click **Scan**.

2 Click **Scan/Save**.
The following screen appears.



Note: The viewport on the screen appears when you click the **Preview** button.

3 Select the document option according to the document you are scanning:

- Gray; for scanning gray-scale images
  or
- Black/White; for scanning text or line art images

4 Select the lightness option according to the document you are scanning:

- High; for a dark original document
  or
- Normal; for a normal original document
  or
- Low; for a light original document

5 Select the contrast option:

- Strong; to enhance contrast of the scanned image.
  or
- Medium; to make contrast of the scanned image medium.
  or
- Weak; to weaken contrast of the scanned image.

6 Click the **Preview** button.
The PageScanner starts scanning. The scanned image appears in the viewport (right half of the screen) approximately 20 seconds later.

Note: When the IBM 8514 display is attached to the IBM Personal System/2 via the 8514 Adapter/A and the Microsoft Windows/286 is used, an actual gray image appears in the viewport.

Scan and Save

Image Control Selection:

1 Looking at the preview-scanned image, change the image control selection if needed.

Area Setting:

2 Use one of the ways listed below to specify the area that you want to save:

- To specify whole area, click the **Full Area** check box.

  Note: When the Full Area is selected, a cross appears in the box. To cancel the selection, click the box again.

- To specify a partial area with the mouse, move the pointer to a corner of the area you want to specify. Drag the pointer to enclose the area.

- To specify a partial area with the keyboard, type the top-left origin of the area you want to specify in the **Area Origin** box, and type the size of the image in the **Area Size** box. The specified area is enclosed with a box in the viewport.

  If the Full Area is selected, you cannot specify a partial area.

Print Width Setting:
This sets the print width of the scanned image for your printer. The program converts the original size of the scanned image to the specified size for printing.

3 Type the width of image for printing in the edit box, or use the scroll bar that is located on the right of the edit box.

4 Click the **Scan** button.

5 Type a file name and extension (*.tif* is recommended) for the image file to be saved.

6 Click the **OK** button.
The scanner starts scanning. When the scanning completes, the image is saved on the disk with the tag image file format (TIFF).

7 Click the **OK** button to confirm the completion of scanning.

Multitasking with Other Desktop Publishing Programs

When you run the PageScan program while using other desktop publishing programs:

1 Start the PageScan program.

2 Click the minimize box that is located on the upper-right corner of the PageScan main window. A scanner icon appears at the bottom of the screen.

3 Start your other desktop publishing program.

4 When you need to get an image file, double-click the scanner icon. The PageScan main window appears.

5 Scan and save the image.

6 Click the minimize box that is located on the upper-right corner of the PageScan main window to return to the desktop publishing program.

You can repeat the above procedure as needed.

Reader's Comment Form

Guide to Operations GK2T-0957-1

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Please do not use this form for technical questions regarding the IBM PageScanner, or for requests for additional publications; this only delays the response. Instead, direct your inquiries or request to your authorized PageScanner dealer, or to your IBM marketing representative.

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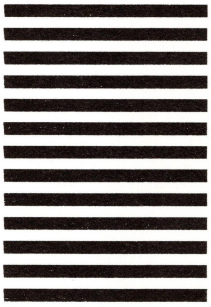

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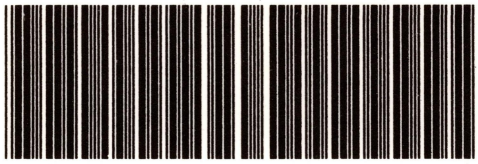

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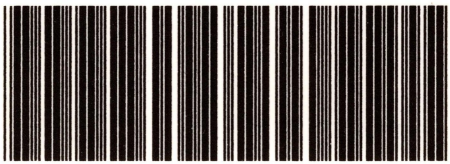

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